

### **Abstract of the disclosure:**

The invention relates to new tools for a new game. The invention consists of a thin solid object, as can be obtained by slicing a cylindrical crown parallel to its axis, and of a net, which can separate the surface in two parts. This solid object is placed concave side up. It can rest on the ground or be mounted on legs or on floating devices. Different objects can be sent and returned over the net to and from players standing on both sides of the net. To send the objects over the net, the players can use their hands or tools as in the games of tennis, ping-pong, badminton, pelota, lacrosse etc.

### **Description of the several views**

Figure 1 An illustration on the geometrical properties of the invention.

A cylindrical crown is defined as the part of space comprised between the surfaces of two cylinders with the same axis, the same height and different diameters. When a cylindrical crown is sectioned by a plane parallel to the axis, two objects are obtained. In the figure, the shadowed region depicts the object of the invention.

Figure 2. A prototype of the invention. In this particular case, the dimensions of the object of the invention are such that it can be mounted on the frame designed to support a classical ping-pong table.

Figure 3. Description of the geometric parameters defining the invention. Together with the diameter of the cylindrical crown and the length of the straight edges, the object of the invention is characterized by the dihedral angle formed by the two planes containing the axis of the cylinder and one or the other of the long edges.

### **Detailed description of the Invention:**

The invention relates to a tool designed to allow the practice of a new recreational activity or competitive game. This new activity or game can be practised indoor or outdoor, on the ground or in water, as for instance in a garden, on the beach, in a swimming pool or in a lake.

The invention consists of a curved solid table or floor, the surface of which is usually in the shape which can be obtained by slicing a cylindrical crown, parallel to the axis of the cylinder (Figure 1). This surface is usually placed concave side up, directly resting on the ground or mounted on legs or on floating devices, and can be virtually separated in two, usually equal, parts, by a net usually mounted perpendicularly to the axis of the cylinder (Figure 2). On this surface, objects of different forms, volumes and masses, usually spherical, a few centimeters in diameter and weighing a few grams, can be sent and returned over the net to and from players standing on one or the other side of the net. To send the objects over the net, the players use raquetts, usually made of wood or plastic or of any other material, usually in the shape of a flat circle, ellipse or square or any other shape suitable to render easier or more difficult at will, the practice of the activity.

The overall size of the surface determines whether the activity is practiced by players standing and moving around the surface itself, as it is the case in the game usually called ping pong, or by players moving on the surface itself, as it is the case in

the game of tennis. The invention will be then separately described for the two possibilities, i. e.

- the curved surface is mounted on supports and the players do not stand on it
- the curved surface is resting on the ground and the players do stand and move on it.

**First case:** the curved surface is mounted on supports and the players do not stand on it.

The surface will have variable dimensions, the length will be between one and twelve meters, preferably between two and six meters and the width will be between 50 cm and six meters, preferably between one and three meters. The thickness of the curved crown will be between 0.5 and 90 centimeters, according to the material, preferably between 2 and 10 centimeters. A prototype is depicted in Figure 2. The curved surface can be obtained in any possible way known to the expert in the field of molding or carving objects made of plastic, metal, plexyglass, inflatable material, wood etcetera . In the case in which the surface is obtained by slicing a regular cylindrical crown, the curvature of the surface will be such that the concave diedral angle formed by the the two planes containing the axis of the cylinder and one of the outer edges of the long sides, will have values between 5 and 180 degrees, preferably between 20 and 90 degrees (Figure 3).

The net across the surface will be made of any type of material, flexible textiles like cotton or nylon held by appropriate devices as well as rigid materials such as wood, plastics, plexyglass or metal. The dimension of the net will be appropriate to match the width of the surface, although in some instances the net could be smaller and provide only a partial obstacle to the movement of the object sent across the table by the players, and its height can vary between 5 and 150 centimeter, preferably between 10 and 30 centimeters.

The surface can rest on a frame of wood, metal or plastic, of the appropriate dimensions to hold it firmly, and maintain it at a distance from the ground varying between 20 and 190 cm, preferably between 60 and 120 centimeters. For practicing in water, the frame can be added with appropriate floating devices to maintain it at the desired heighth above the surface of the water.

**Second case:** the curved surface is resting on the ground and the players practice the activity while standing or moving on it.

The surface will have variable dimensions, the length will be between three and fifty meters, preferably between seven and twentyfour meters and the width will be between one and twenty meters, preferably between two and ten meters. The thickness of the curved crown will be between 0.5 and 30 centimeters, according to the material, preferably between 2 and 10 centimeters. The curved surface can be obtained in any possible way known to the expert in the field of molding or carving objects made of plastic, metal, plexyglass, inflatable material, wood etcetera. In the case in which the surface is obtained by slicing a regular cylindrical crown, the curvature of the surface will be such that the concave diedral angle formed by the the two planes containing the axis of the cylinder and one of the outer edges of the long sides, will have values between 5 and 180 degrees, preferably between 20 and 90 degrees (Figure 3).

The net across the surface will be made of any type of material, flexible textiles like cotton or nylon held by appropriate devices as well as rigid materials such as wood, plastics, plexyglass or metal. The dimension of the net will be appropriate to span the width of the surface, although in some instances the net could be smaller and provide only a partial obstacle to the movement of the objects sent across the surface